

IDENTIFYING MINERALS

BY USING THE PROPERTIES OF MINERALS

Name _____ Class _____

I. COLOR - an _____ physical property

A. Can be used to identify only a _____ minerals

1. _____ is always green
2. _____ is always blue

B. Because color can _____ due to:

1. Tarnish
2. Rust
3. Cold
4. Rain
5. Pollution

C. And, many minerals come in a _____

1. _____ - can be purple, yellow, pink, clear

II. LUSTER - the way a mineral _____

A. Metallic - as _____ as a _____

B. Nonmetallic -

1. Glassy - _____ and _____
2. Silky - _____
3. Greasy - _____
4. Brilliant - _____
5. Pearly - _____

III. HARDNESS - the ability of a mineral to _____

A. 1 - Can be _____ scratched with a _____ Example: _____

B. 2 - Scratched with a _____ Example: _____

C. 3 - Scratched by a _____ Example: _____

D. 4 - Scratched by a _____ Example: _____

E. 5 - _____ scratches _____ Example: _____

F. 6 - _____ scratches _____ Example: _____

IV. BREAKAGE - the way a mineral _____

A. Cleavage - When a mineral breaks along _____

Example: _____

B. Fracture - When a mineral breaks along _____

Example: _____

V. STREAK - the _____ of the _____ left by a mineral when it is rubbed against a _____ (_____)

A. Streak is always the _____

B. Streak is _____ than color

1. Many minerals have a _____ streak Example: _____

2. Other minerals have colored streaks

Example: _____ has a _____ streak

Example: _____ has a _____ streak

VI. OTHER PROPERTIES

A. Smell - Example: _____ smells like a rotten egg

B. Magnetic - Example: _____ is magnetic

C. Fluorescence - Example: _____ glows under ultraviolet light

D. Taste - Example: _____ tastes salty

E. Chemical Reaction - Example: _____ fizzes when HCl Acid is dropped on it

Identifying Minerals Pre-Lab

Name _____ Class _____

Tomorrow you will be given a set of minerals to identify by name. Minerals can usually be identified by **Inspection**. You will inspect each mineral for **LUSTER, HARDNESS, BREAKAGE, STREAK, AND COLOR**. Use your Identifying Minerals Notes.

1. COLOR

a. **Color** is the most easily observed property of minerals but is the **least useful** property for identification. List two reasons why this is true and give one example for each.

(1)

(2)

****b.** How are you going to determine the **COLOR** of the minerals in your mineral lab?

2. LUSTER

a. A mineral with a **metallic luster** shines like:

b. Give examples of minerals with a **metallic luster**.

c. A mineral with a **nonmetallic luster** can be called:

d. Give examples of minerals with a **nonmetallic luster**.

****e.** How will you determine the **LUSTER** of the minerals in your minerals lab?

3. HARDNESS

a. Hardness is:

b. What are the hardest and softest minerals?

c. What are the **hardnesses** of a penny, your fingernail, a nail, and a glass plate?

****d.** How will you determine the **HARDNESS** of the minerals in your minerals lab?

4. BREAKAGE

a. **CLEAVAGE** is -

b. **FRACTURE** is -

****c.** How will you determine whether a mineral shows **cleavage** or **fracture**?

5. **STREAK**

a. **STREAK** is -

b. How might **STREAK** be better than color as a way to identify a mineral?

c. How will you determine the **STREAK of the minerals in your lab?

6. **OTHER TESTS** Tell how you know each of the following minerals passes the test:

a. **HYDROCHLORIC ACID TEST**

CALCITE -

DOLOMITE -

b. **FLUORESCENCE TEST**

FLUORITE - -

c. **DOUBLE REFRACTION TEST**

CALCITE -

d. **TASTE TEST**

HALITE -

e. **MAGNETIC PROPERTY TEST**

MAGNETITE -

7. Go over this **PRE-LAB** and make a list of **all** the **materials** you think you will need for the **MINERAL LAB**. **Try not to leave anything out!**